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| 09/557,741 | 04/25/2000 | YUTAKA NAKAJIMA | 1018.098US1 | 9943 |

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| EXAMINER |
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SPOONER, LAMONT M

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| ART UNIT | PAPER NUMBER |
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2654

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 09/557,741 | Applicant(s) NAKAJIMA ET AL. | |
| | Examiner Lamont M Spooner | Art Unit 2654 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10, 16-25 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 April 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 11-15 have been considered but are moot in view of the new ground(s) of rejection

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Gould et al. (hereinafter referred to as Gould, US Patent No. 6,073,097 filed Jun. 26, 1997).

As per **claim 11**, Gould discloses a computer-implemented method for facilitating text entry for creation of a document. the method comprising:

receiving by a language model service (Fig. 4 item 158-update context language model) in a pre-processing mode of operation a range (C.4.lines 42-45, 57-65) within a document (C.29.lines 55-61-training mode is interpreted as the pre-processing mode of operation, Fig. 35 item 594-range within a document) from a handler (Fig. 4 item 150-recognize module) for an input device (Fig. 4 item 122-microphone);

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generating by the language model service advice regarding text (C.4.lines 57-65, C.20.lines 17-55-the context is provided from the active document-Fig. 35 item 594, C.30.lines 6-42) under consideration by the handler (C.20.lines 35, 36-the recognition module) to insert within the document at the range (Fig. 38 item 613, Fig. 39 item 642, C.31.lines 10-12-text editor creates a document), the language model service operating based on a context-based language model (C.4.lines 57-65, C.20.lines 17-55-the context if provided from the active document-Fig. 35 item 594, C.30.lines 6-42) distinct from a language model utilized internally by the handler (Fig. 4 items 150, 158-the speech recognition language model is distinct from the contextual language model in all parts of Fig. 4, the recognizer comprises a distinct internal language model);

providing by the language model service the advice to the handler for consideration by the handler in creation of the document (C.20.lines 29-41-the language model service provides advice in the form of probability due to context to the handler-recognition comprising an internal language model, C.3.lines 1-4 "creating and editing text"-creating a document).

As per **claim 12**, Gould discloses all of the limitations of claim 11, upon which claim 12 depends. Gould further discloses:

determining by the handler the text under consideration to insert within the document at the range based on the advice provided by the language model service (Fig. 8, C.12.-C.13.-the handler determines the text under consideration by the context vocabulary, C.20.lines 29-41); and,

inserting by the handler the text under consideration within the document at the range (Fig. 39 item 642-inserted text, C.12.lines 17-18).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gould in view of DeStefano et al. (US Patent No. 6,308,187 filed Feb. 9, 1998).

Gould and DeStefano et al. are analogous art in that they both involve spoken and written/text communication.

As per claim 13, Gould discloses all of the limitations of claim 12, upon which claim 13 depends. Gould further discloses:

inserting by the handler the text under consideration within the document at the range (Fig. 39 item 642-inserted text, C.12.lines 17-18).

Gould does not disclose:

inserting by the handler the text under consideration within the document at the range comprises so inserting the text at the range via a common text framework through an abstraction of the document as exposed by an owning application.

However, as it is well known in the art, Destefano et al teaches having an abstraction of the document exposed by an owning application abstraction of the document (C.7.lines 28-30-owning application, C.8.lines 26-29, Fig. 2 item 38-each data

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item is owned by it's application, which is included in the common text framework of Fig. 2 item 38). Therefore, at the time of the invention, it would have been obvious to modifying Gould with Destefano et al. by including a common text framework through an abstraction of a document as part of text insertion. The motivation for doing so would have been to insert the corrections into the appropriate application, through a set of applications linked to the programs that determine the corrections (C.3.lines 65-C.4.line 4).

As per claim 14, Gould discloses all of the limitations of claim 11, upon which claim 14 depends. Gould further discloses providing by the language model service the advice to the handler comprises:

accessing text within the range of the document (C.4.lines 42-45, 57-65)

Gould does not disclose:

accessing text within the range of the document via a common text framework through an abstraction of the document as exposed by an owning application thereof via the common text framework.

However, as it is well known in the art, Destefano et al. teaches having an abstraction of the document exposed by an owning application abstraction of the document (C.7.lines 28-30-owning application, C.8.lines 26-29, Fig. 2 item 38-each data item is owned by it's application, which is included in the common text framework of Fig. 2 item 38). Therefore, at the time of the invention, it would have been obvious to

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modify Gould with Destefano by accessing text through an abstract. The motivation for doing so would have been to access text belonging to an appropriate application in within a common text set of applications (C.3.lines 61-64).

6. Claim 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gould in view of Bellegarda et al. (US Patent No. 6,308,187 filed Feb. 9, 1998).

Gould and Bellegarda et al. are analogous art in that they both involve message recognition.

As per **claim 15**, Gould discloses all of the limitations of claim 11, upon which claim 15 depends. Gould does not disclose:

the advice provided by the language model service to the handler for the input device in the pre-processing mode of operation comprises a best path through a lattice maintained by the language model service.

However, Bellegarda teaches the advice provided by the language model service (C.4.lines 14-21-the word models provide advice-probabilities) to the handler for the input device in the pre- processing mode of operation comprises a best path through a lattice (C.8.lines 24-26, 33, 34 "the phone drinks" and "the phone drinks" using the 3-gram model-the tri-gram model with the choices "rings, drinks and shrinks" indicate the lattice paths available, and by the score/probability the best path is determined, C.9.lines 1-8-best path choices), maintained by the language model service (C.8.lines 23-26). Therefore, at the time of the invention, it would have been obvious to one ordinarily skilled in the art to modify Gould with Bellegarda et al. by having a lattice to

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determine best path for recognition. The motivation for doing so would have been to utilize well known lattice method for word selection (C.8.lines 14-34).

Allowable Subject Matter

7. Claims 1-10, 16-25 are allowed.

The following is an examiner's statement of reasons for allowance:

As per **claims 1, 8 and 23**, the instant application is deemed to be a non-obvious improvement over the invention presented in US Patent No. 6,285,785, Bellegarda et al. The improvement comprises having a language model service shareable among handlers for input devices wherein the handler relies on a first model for determining text entry and the language model service relies on a second language model distinct from the first language model, the second language model related to a context of the document within range, the advice fro consideration by the handler, wherein the handler determines and enters text in order to create the document after considering conclusions of the first language model and the second language model; and a correction mode of operation, wherein after considering the suggestions of a number of different handlers and a second language model, a language model service determines text corrections.

Claims 2-7, 9, 10, 24 and 25, further limit their parent claims and therefore are allowed.

As per **claim 16**, the instant application is deemed to be a non-obvious improvement over the invention presented in US Patent No. 6,285,785, Bellegarda et al. The improvement comprises having a correction mode wherein a number of different

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handlers for a number of different input devices were initially responsible for insertion of text, each of the different handlers implementing a language model distinct from a first language model, and determining corrections to text by a language model service after considering a first language model and the suggestions received from the different handlers.

Claims 17-22, further limit their parent claims and therefore are allowed.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Maeda et al. (US Patent No. 4,651,289 filed Mar. 17, 1987) teaches language model sharing utilized various language models tailored to various applications, having multiple input, for pattern recognition and display.
- Besling et al. (US Patent No. 6,363,348 filed Oct. 1998) teaches having a pre-processing mode of operation, which comprises determining a best path through a lattice for word recognition, and having a language model which utilizes contextual information along with a separate language model for speech recognition.

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- Yamada et al. (US Patent No. 5,692,097 Nov. 25, 1997) teaches having frame and lattice choice points for an input in determining a best choice in word recognition.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

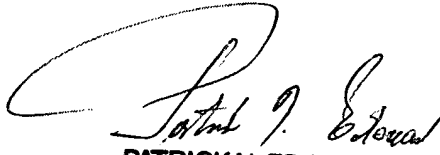
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lamont M Spooner whose telephone number is 703/305-8661. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 703/305-9645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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12/24/04



PATRICK N. EDOUARD
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